

AMENDMENTS TO THE CLAIMS

Listing of Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

Claims 1-40 (Cancelled).

Claim 41 (New) A processing system for processing a plate shaped sample, the system comprising:

a separating apparatus arranged to separate the plate shaped sample into upper and lower samples while substantially horizontally holding the plate shaped sample; and

an inverting apparatus arranged to pivoting the separated upper sample through about 180 degrees.

Claim 42 (New): The system according to claim 41 further comprising a conveyor mechanism arranged to convey the separated upper sample from the separating apparatus to the inverting apparatus while supporting the separated upper sample from an upper side thereof.

Claim 43 (New): The system according to claim 41 further comprising a conveyor mechanism arranged to convey the separated upper sample from the separating apparatus to the inverting apparatus, the conveyor mechanism including a robot hand having a holding portion arranged to hold the separated upper sample at a peripheral portion thereof.

Claim 44 (New): The system according to claim 41 further comprising:

a cleaning apparatus arranged to clean the upper and lower separated samples;

a conveyor mechanism arranged to convey the separated lower sample from the separating apparatus to the cleaning apparatus, to convey the separated upper sample from the separating apparatus to the inverting apparatus, and to convey the separated upper sample pivoted by the inverting apparatus from the inverting apparatus to the cleaning apparatus.

Claim 45 (New): The system according to claim 44 further comprising a centering apparatus arranged to center the plate shaped sample to be separated by the separating apparatus, wherein the conveyor mechanism is further arranged to convey the plate shaped sample from the centering apparatus to the separating apparatus.

Claim 46 (New): The system according to claim 41, wherein a conveyor mechanism arranged to convey the sample from and/or to the separating apparatus includes the inverting apparatus.

Claim 47 (New): The system according to claim 41 further comprising a storing mechanism arranged to store the separated upper and lower samples in respective cassettes in a state that separated surfaces of the separated upper and lower samples are directed to an upward direction.

Claim 48 (New): A processing method for processing a plate shaped sample, the method comprising:

separating the plate shaped sample into upper and lower samples while substantially horizontally holding the plate shaped sample; and
pivoting the separated upper sample through about 180 degrees.

Claim 49 (New): The method according to claim 48 further comprising:
cleaning and/or drying the separated lower sample; and
cleaning and/or drying the separated upper sample after the separated upper sample has been pivoted through about 180 degrees.

Claim 50 (New): The method according to claim 48 further comprising:
cleaning the separated lower sample by using a cleaning apparatus; and
cleaning the separated and pivoted upper sample by using the cleaning apparatus after the cleaning of the separated lower sample has been completed.

Claim 51 (New): The method according to claim 48 further comprising:
storing the separated upper and lower samples in respective cassettes in a state that separated surface of the separated upper and lower samples are directed to an upward direction.

Claim 52 (New): A semiconductor substrate manufacturing method comprising;

bonding a first substrate having a semiconductor layer and a separation layer under the semiconductor layer, and a second substrate to form a bonded substrate stack having an insulating layer, the semiconductor layer and the separation layer, and

separating the bonded substrate stack into upper and lower substrates at the separation layer while substantially holding the bonded substrate stack, one of the separated upper and lower substrates including an SOI structure;

inverting the separated upper substrate so as to direct a separated surface of the separated upper substrate to an upward direction;

processing the separated substrate including the SOI structure to remove the remaining separation layer, and

processing the separated substrate not including the SOI structure to remove the remaining separation layer for recycling.